

## Chapter V

### UNFINISHED BUSINESS

For the past thirty years , a continuous inland waterway along the Gulf Coast has been a practical reality. Undergoing occasional modification, realignment, enlargement, and extension into new tributary channels, the GIWW has functioned as a full-fledged member of the system of national waterways. Whether or not this inland waterway has justified its creation poses an appropriate question. Numerous yardsticks and complex formulae are applied to measure the ramifications of the GIWW. Assessments are couched in terms of the canal's economic, social, recreational, and environmental effects. While some consequences of the waterway are subtle and indirect, others point clearly to distinctive trends and incontestable conclusions. Still others raise fresh concerns and questions for the future of water resources development in general and for the GIWW in particular.

### AN UNQUALIFIED SUCCESS

Because the earliest justifications for embarking on waterway projects were based on economics, an evaluation of the GIWW should first consider its economic impact as seen in the quantities of cargo transported along the main channel from Apalachee Bay to Brownsville. Here, the GIWW has greatly surpassed, by a factor exceeding twenty, the most optimistic original projections for its potential. Tonnage statistics tell the waterway's success story in no uncertain terms. In 1949, the year this channel was completed, the GIWW carried slightly more than 28 million tons.<sup>1</sup> By 1972, this channel carried almost 109 million tons with the Morgan City-Port Allen alternate route accounting for an additional 19 million tons.<sup>2</sup> Through the remaining years of the 1970s, tonnages decreased slightly and leveled off, possibly due to such phenomena as energy shortages, changes in patterns of petroleum distribution and importation, and national economic difficulties.

The ratio between the benefits the waterway produces and the cost of its construction offers another evaluation of a navigation project. Construction costs for inland waterways vary greatly, depending on such factors as extent of local cooperation, availability of rights-of-way, and technical considerations related to specific geographical conditions of the area. The average construction cost of the Gulf Intracoastal Waterway, less than \$300 thousand per mile, presents a modest contrast to portions of the upper Mississippi and Illinois waterways that cost \$7.2 million and \$8.1 million per mile, respectively. Estimated at 26 to 1, the GIWW benefit-cost ratio places this waterway in a truly enviable position.<sup>3</sup>

Analyzing GIWW usage by channel segments generates still another perspective on the impact of the waterway. Each channel segment has developed trade patterns individually suited to its unique commercial characteristics. As a result, economic development along the GIWW does not occur uniformly. Tonnage statistics for the year 1979 (Table 1) show the differences among the three major reaches of the main channel.<sup>4</sup> These figures leave little doubt that the portion of the waterway west of the Mississippi River has had the greatest impact on commercial activity.

Table 1

CARGO TRANSPORTED BY SECTION OF GIWW IN 1979

<u>Channel Section</u>	<u>By Weight (in millions of tons)</u>	<u>By Weight and Distance (in million of ton-miles)</u>
Apalachee Bay to Panama City	3.0	310
Panama City to Pensacola Bay	5.0	510
Pensacola Bay to Mobile Bay	7*9	371
Mobile Bay to Mississippi River	21.2	2,167
Mississippi River to Sabine River	55.9	8,446
Sabine River to Galveston	42.9	2,725
Galveston to Corpus Christi	22.4	2,451
Corpus Christi to Mexican Border	2.5	306

Cargo transported into two or more sections is counted in the weight total for each section.

THE GIWW IN TEXAS

Texas contains the longest section of the waterway. More than 400 miles of the GIWW are located in Texas, connecting the state's deep-water ports and industrial complexes with the markets of the Midwest. Commercial growth on that section has been striking, with the 5,481 million ton-miles carried on the GIWW in Texas in 1979 representing a doubling of the combined weight and distance figures of 1961.<sup>5</sup> The direct economic contribution of the GIWW to the state of Texas has been calculated at an annual \$1.8 billion. This includes the value of cargo to ports, expenditures on the waterway itself, and the economic impact of water transportation and water transportation industries. The combined direct and indirect economic impact of the GIWW for Texas has been estimated at nearly \$19 billion annually.<sup>6</sup>

Many factors reflect the influence of the GIWW on the Texas economy. Its contributions include more jobs, greater income, increased tax revenues for local communities, energy savings, and reduced prices of consumer products. Between 1950 and 1975, industrial interests established nearly nine thousand waterside plants along the banks of the GIWW, attracted by the proximity to raw materials, good transportation, and the availability of skilled labor

supply, land, and water resources. At a time when unemployment was rising and many plants were cutting back production, 301 new plants and expansions appeared along the waterway.<sup>7</sup>

Unlike many other states, Texas exports more goods than it imports. The fact that almost 75 percent of these goods are shipped from the state by water reveals how heavily the Texas economy relies on water transportation. Overall, the impact of the GIWW on Texas port activity is clearly considerable, but the extent to which the GIWW accounts for total commerce at selected Texas ports varies widely (Table 2).<sup>9</sup> If this range of commercial activity is viewed as a microcosm for the waterway as a whole, comparable fluctuations may be assumed among other ports along the entire 1,000-mile length of its course.

Table 2  
GIWW PERCENT OF TOTAL COMMERCE\* AT SELECTED TEXAS PORTS IN 1974

<u>Port</u>	<u>Per cent</u>
Houston	33.1
Corpus Christi	23.4
Beaumont	30.7
Port Arthur	18.7
Texas City	55.3
Freeport	41.6
Galveston	12.4
Matagorda Ship Channel	13.9
Victoria	100.0
Brownsville	62.1
Orange	94.6
Sabine Pass	98.7

\*Total commerce at these ports amounted to 273,507,212 tons.

Ports are listed by tonnage in descending order.

Recreation adds one further dimension of economic impact. Pleasure craft make approximately 1.5 million trips on the GIWW annually. Because sports fishing, residential development, and tourism all generate benefits for the coastal area, the recreational boating public constitutes another meaningful class of GIWW users.<sup>10</sup>

#### PETROLEUM AND THE GIWW

Petroleum merits special mention in any discussion of the GIWW. The discovery of oil at Spindletop near Beaumont, Texas, in 1901 shaped the twentieth century development of the Gulf coastal region. The interdependence between the petroleum industry and the GIWW commands attention historically, economically, socially, and ecologically. Refineries and related industries situated their facilities along the coast to be near the source of supply and the availability of water transportation. Impetus provided by the petroleum and, later, the petrochemical industries has changed the

character of the coastal region, causing the emergence of major cities and transforming the Texas coast into an urbanized area.<sup>11</sup>

Petroleum and petroleum products have long dominated the commodity movement along the length of the GIWW. In Texas, petroleum products (33.3 percent), chemicals (21.9 percent), and crude Petroleum (21.6 percent) account for 76.8 percent of total GIWW tonnage. On the bustling channel segment between the Sabine River and Galveston Bay, these petrochemical products compose an even higher 87.2 percent of the total.<sup>12</sup>

The profound upheavals that rocked the petroleum industry during the 1970s are bound to carry implications for the GIWW as well. 'High prices have tamed the industrialized world's appetite for petroleum, restructured traditional energy and economic growth relationships, and triggered an unprecedented search for oil and gas.'<sup>13</sup> Price-induced conservation, a frantic scramble for alternate sources of energy, and widespread recession, primarily in industrialized nations, have led to a 'marked decline in free world oil consumption since 1979.'<sup>14</sup>

The lag-range effects of these shifts in petroleum prices and consumption are at present uncertain. "Economic forecasts . . . may take second place to political considerations over the coming decade in determining the course of energy balances."<sup>15</sup> Whatever happens probably will be reflected in some changes of commodity flow along the waterway and in changes in waterside plant facilities. Petroleum will almost certainly continue as the predominant commodity, but other commodity groups may well show appreciable relative increases.

### KEEPING PACE WITH MARINE TECHNOLOGY

Channel and lock dimensions are the limiting factors determining what vessels can travel on the GIWW. In turn, innovations in vessel technology exert demands to improve the capacities of the waterway. New designs have led to production of larger barges and more powerful tugboats. The standard 900-ton hopper barges of the 1940s gave way to the 1,400-ton-capacity jumbo hopper barges introduced in the 1950s. Today, barges transport cargoes exceeding 2,000 tons on some of our inland waterways.<sup>16</sup> Advances such as containerization and assemblage of barges into integrated tows have further revolutionized waterway operations.

For water carriers to take advantage of these technological breakthroughs, however, the channels must be sufficient to accommodate the new vessels. Currently, navigational restrictions on the GIWW preclude the use of some of the larger barges already in service on other waterways. Lock restrictions present problems for the Louisiana canal. Width restrictions particularly handicap the busiest segment of the waterway--that between the Sabine River and Galveston Bay. The present width of 125 feet restricts maximum tows on the GIWW while other waterways wider than 200 feet can handle barge tows containing as many as forty barges. Congress recognized these limitations as early as 1962 when it approved legislation authorizing enlargement of

the GIWW segment between the Sabine River and the Houston Ship Channel to dimensions of 16 by 150 feet, but a snag in local sponsorship has delayed prosecution of the enlargement.<sup>17</sup>

Ordinarily, a local sponsor assumes responsibility for providing all land needed for construction and maintenance of the project at no cost to the federal government. Further requirements call for the local sponsor to alter pipelines, cables, and other utilities and to construct and maintain containment facilities for dredged material. Whatever requirements are involved, the federal government must be held free from any damage that might result from construction and maintenance of the project.<sup>18</sup>

Before 1975, the GIWW in Texas had no single local sponsor; diverse navigation districts and river and port authorities attempted to coordinate their local efforts with those of the federal sponsor, the Corps of Engineers. The Texas Coastal Waterway Act of 1975 authorized the state to act as local sponsor of the GIWW and designated the State Highway and Public Transportation Commission to act on behalf of the state in fulfilling the attendant responsibilities. The act further mandated the commission to carry out the state's coastal policy, emphasizing the importance of protecting the environment in conjunction with supporting shallow-draft navigation improvements.<sup>19</sup>

The Flood Control Act of 1979 (P.L. 91-611) required a written contract committing a local sponsor for a water resources project to have full authority and capability to pay damages incurred by the project, if necessary. This statutory requirement would pledge the credit of the state, thereby violating the Texas constitution. This conflict between state and federal law has delayed implementation of full state sponsorship in Texas. Senator Lloyd Bentsen attempted to resolve the dilemma by introducing an amendment that would make the payment of damages contingent on the state's legislative appropriations process, but the amendment failed. Until remedial action makes possible the formal conclusion of the necessary contract, the state cannot assume full local sponsorship and enlargement of the Texas GIWW cannot proceed.<sup>20</sup>

### THE THIRD WATERWAY AGITATION

If the focus on national waterways policy during the first quarter of the nineteenth century and again during the first decade of the twentieth represented the first two 'waterway agitations, "the United States may now be experiencing its third such agitation. In 1976, Congress authorized a large-scale, five-year study of the waterways, the first study of its scope since Theodore Roosevelt's administration. Meanwhile, the political climate surrounding navigation improvements and waterways policy has changed dramatically.

The crux of the change relates to the financial question of who will pay for the waterways. Historically, the inland waterway system of the United States has been operated free of tolls or other

charges. Federal costs of construction and maintenance have been funded from general tax revenues with no special contribution from the users of the navigation improvements. This policy was based on the rationale that not only the waterways operators but also the consumers and, thus, the entire country benefited from inexpensive water transportation. Today, an insistent effort to enable the federal government to recover at least a part of the project costs has resulted in the imposition of a four cent users' tax on marine fuel, first levied October 1, 1980.<sup>21</sup>

A bill (S. 1692) passed in November, 1981 by the Senate Water Resources Subcommittee calls for all harbor deepening projects to be financed locally with the federal government paying 75 percent of the operating and maintenance costs. This bill may presage the attitudes of congressmen in 1982 when they grapple with the issue of user charges to recovery similar public investments on the inland waterways. Various forms of cost recovery suggested include the marine fuel tax already in effect, lockage fees, license fees, freight surcharges, and waterway segment tolls. Some authorities claim that, for a waterway like the GIWW, localized fees associated with individual locks or waterway segments could be far more destructive to commerce than broad-based cost-recovery measures.<sup>22</sup>

Beyond these financial considerations, other changes lie ahead for the GIWW. Some merely pose unanswered questions right now. Construction continues on the tremendous project to connect the Tennessee River with the Tombigbee River despite opposition in Congress, court suits, and huge cost increases. The "Tenn-Tom" waterway would provide the Tennessee Valley with an outlet to the Gulf through Mobile rather than via the virtually parallel Mississippi River, reducing the distance of probable shipments by an average of 40 percent. Proponents insist the Tenn-Tom, if completed late in the 1980s as projected, could drastically alter current traffic patterns and relieve some of the load on the lower Mississippi River. Also, it might bring some economic activity to the depressed Mississippi and Alabama backwoods through which it is being dug. Opponents argue the potential usage is trivial compared to the less costly Panama Canal. Meanwhile, some signs point to a relaxation of the stringent environmental regulation that have hamstrung so many waterways projects during the last decade. In any event, the movement of greater quantities of coal, as the nation's energy-use patterns respond to higher petroleum prices, may be expected to be a vital component in the development of this probable future tributary to the GIWW.<sup>23</sup>

Local sponsorship may become a more compelling issue in the future. Even if Texas resolves its current conflict, other problems remain ahead. Because almost all Texas exports travel the Louisiana portion of the waterway to the Mississippi River and on to the Midwestern trade markets, conditions on the Louisiana segment of the GIWW directly influence the commodity flow from Texas. The political atmosphere in Louisiana that prompted Roy Miller to campaign so strenuously in the 1920s has not disappeared. Louisiana's major ports

are located on the Mississippi River, not on the GIWW; therefore, Louisiana does not share the same degree of enthusiasm for promoting the canal that Texas does. Recognizing this problem, the Texas State Highway and Public Transportation Commission has announced plans to establish a permanent formal working relationship with its neighboring state to provide the impetus for improvements to the entire GIWW regardless of the state in which they are located.<sup>24</sup>

In the final analysis, the 1,000-mile "ditch" that is the GIWW, so unimposing as it runs quietly along the Gulf coastline, has profoundly affected regional and national economies. The many facets of its impact defy enumeration, much less precise measurement. The complex interrelationships among economic, political, social, and environmental factors that have contributed to the waterway's history will continue to fashion its future. In the face of the almost insurmountable obstacles that long blocked its creation, the transformation of this waterway from an extravagant concept into an invaluable reality may seem miraculous. Now that it is there and adaptable, the Gulf Intracoastal Waterway promises a future that should be fully as fascinating as its past.